

I Claim:

1. A system for detecting line status of a telephone terminal in parallel with a second communications terminal at a customer's premise, the telephone and second terminal being connected to the Public Switched Telephone Network (PSTN), said system comprising:

a DC isolation barrier isolating the PSTN and the telephone from the second terminal;

means in the isolation barrier to transfer an analogue representation of voltage values received from the PSTN to a loop detection circuit; and

detection means in said loop detection circuit to detect a transition in the analogue representations having a duration greater than a selected value.

2. The system as defined in claim 1 wherein said second terminal is a Data Access Array (DAA) for interfacing data transmission equipment with the PSTN.

3. The system as defined in claim 1 wherein voltages from the PSTN are Tip and Ring voltages.

4. The system as defined in claim 3 wherein said loop detection circuit includes means to determine, from said analogue representation, polarity information respecting said Tip and Ring voltages in order to correctly orientate said line status.

5. The system as defined in claim 4 wherein said loop detection circuit includes means to detect a transition of said Tip voltage with respect to said Ring voltage.

6. The system as defined in claim 1 wherein said detection means provides an indication of a change in line status of said parallel telephone when said transition in the analogue representation has a duration greater than a selected value.

7. The system as defined in claim 6 wherein said selected value is 200 ms.

8. The system as defined in claim 6 wherein said selected value is programmable.

9. The system as defined in claim 6 wherein an indication of a change of state in line status of said parallel telephone indicates that said parallel telephone has gone off-hook.

10. The system as defined in claim 9 wherein said second terminal is caused to go on-hook upon detection that said parallel telephone has gone off-hook.

11. A system for detecting off-hook status of a telephone connected in parallel with a data transmission terminal at a customer's premise, the telephone and the data transmission terminal being connected to the Public Switched Telephone Network (PSTN), said system comprising:

a DC isolation barrier isolating the PSTN and the telephone from the data terminals connected in parallel;

means in the isolation barrier to generate an analogue representation of Tip and Ring voltage values received from the PSTN;

means to pass the analogue representation to a downstream loop detection circuit; and

detection means in said loop detection circuit to detect a transition in the analogue representation having a duration greater than a selected value wherein a transition in the analogue representation having a duration greater than said selected value indicates that said telephone has gone off-hook.

12. The system as defined in claim 11 wherein said selected value is programmable.

13. The system as defined in claim 12 wherein said selected value is 200 ms.

14. A method of detecting line status of a telephone terminal connected in parallel with a second communications terminal at a customer's premise, the telephone and second terminal being connected to the Public Switched Telephone Network (PSTN), said method comprising the steps of :

providing a DC isolation barrier isolating the PSTN and the telephone from the second terminal;

generating in the isolation barrier an analogue representation of voltage values received from the PSTN;

transferring the analogue representation to a loop detection circuit; and

detecting, in said loop detection circuit, transitions in the analogue representations having a duration greater than a selected value.

15. The method according to claim 14 wherein a transition in the analogue representation having a duration greater than said selected value indicates that said telephone has gone off-hook.

16. The method as defined in claim 15 wherein said selected value is programmable.

17. The method as defined in claim 15 wherein said selected value is 200 ms.